January 1995

Test 1699: Agco Allis 9675 Diesel 18-Speed

Tractor Museum
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NEBRASKA OECD TRACTOR TEST 1699—SUMMARY 187
AGCO ALLIS 9675 DIESEL
18 SPEED

Location of Test: Tractor Testing Laboratory, University of Nebraska, Lincoln, Nebraska 68583-0832

Dates of Test: September 20-28, 1995

Manufacturer: AGCO Corporation, Duluth, Georgia 30136

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kWh)	Hp.hr/gal (kWh/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed (PTO speed–1058 rpm)					
176.44 *(131.57)*	2200	11.29 *(42.74)*	0.449 *(0.273)*	15.63 *(3.08)*	
Standard Power Take-off Speed (1000 rpm)					
184.44 *(137.54)*	2080	11.23 *(42.52)*	0.428 *(0.260)*	16.42 *(3.23)*	
Maximum Power (2 hours)					
191.97 *(143.15)*	1900	11.12 *(42.10)*	0.407 *(0.248)*	17.26 *(3.40)*	
VARYING POWER AND FUEL CONSUMPTION					
176.44 *(131.57)*	2200	11.29 *(42.74)*	0.449 *(0.273)*	15.63 *(3.08)*	Air temperature
153.53 *(114.49)*	2260	10.34 *(39.13)*	0.473 *(0.288)*	14.85 *(2.93)*	76°F *(24°C)*
115.71 *(86.29)*	2278	8.59 *(32.50)*	0.521 *(0.317)*	13.48 *(2.65)*	Relative humidity
78.58 *(58.60)*	2306	6.88 *(26.03)*	0.615 *(0.374)*	11.43 *(2.25)*	69%
39.49 *(29.45)*	2332	5.25 *(19.89)*	0.935 *(0.568)*	7.52 *(1.48)*	Barometer
1.08 *(0.80)*	2356	3.67 *(13.91)*	23.941 *(14.563)*	0.29 *(0.06)*	29.21"Hg *(98.92 kPa)*

Maximum Torque 601 lb.-ft. *(815 Nm)* at 1449 rpm
Maximum Torque Rise 42.7%
Torque rise at 1799 engine rpm 29%

DRAWBAR PERFORMANCE
(UNBALLASTED—FRONT DRIVE ENGAGED)
FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kWh)	Fuel Consumption Hp.hr/gal (kWh/l)	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—10th Gear									
149.00 *(111.11)*	8296 *(36.90)*	6.74 *(10.84)*	2198	2.78	0.530 *(0.322)*	13.25 *(2.61)*	189 *(87)*	70 *(21)*	28.87 *(97.77)*
75% of Pull at Maximum Power—10th Gear									
115.79 *(86.34)*	6233 *(27.73)*	6.97 *(11.21)*	2258	1.85	0.572 *(0.348)*	12.28 *(2.42)*	187 *(86)*	71 *(22)*	28.87 *(97.77)*
50% of Pull at Maximum Power—10th Gear									
78.72 *(58.70)*	4155 *(18.48)*	7.10 *(11.43)*	2288	1.38	0.686 *(0.417)*	10.23 *(2.02)*	185 *(85)*	72 *(22)*	28.87 *(97.77)*
75% of Pull at Reduced Engine Speed—12th Gear									
115.66 *(86.25)*	6225 *(27.69)*	6.97 *(11.21)*	1633	2.04	0.487 *(0.296)*	14.43 *(2.84)*	186 *(86)*	73 *(23)*	28.87 *(97.77)*
50% of Pull at Reduced Engine Speed—12th Gear									
78.79 *(58.76)*	4154 *(18.48)*	7.11 *(11.45)*	1656	1.38	0.534 *(0.325)*	13.15 *(2.59)*	184 *(84)*	74 *(23)*	28.87 *(97.77)*

FUEL OIL and TIME: Fuel No. 2 Diesel **Cetane No.** 50.6 **Specific gravity converted to 60°/60° F *(15°/15°C)*** 0.8435 **Fuel weight** 7.023 lbs/gal *(0.842 kg/l)* **Oil SAE** 15W-40 **API service classification** CD-II, CG **To motor** 5.646 gal *(21.371 l)* **Drained from motor** 5.337 gal *(20.203 l)* **Transmission and hydraulic lubricant** AGCO Power Fluid 821XL **Front axle lubricant** AGCO Gear Lube 715 SAE 80W-90 **Total time engine was operated** 21.5 hours.

ENGINE: Make Detroit Diesel series 40 Diesel **Type** six cylinder vertical with turbocharger **Serial No.** *WH3326N0932933* **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** (as specified) 4.59" × 5.35" *(116.6 mm × 135.9 mm)* **Compression ratio** 15.8 to 1 **Displacement** 531 cu in *(8700 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and final drive oil, radiator for transmission oil **Fuel filter** two paper elements **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 74.7-80.0 lb/h *(33.9-36.3 kg/h)* **High idle:** 2325-2425 rpm **Turbo boost** nominal 18.2 psi *(126 kPa)* as measured 18.3 psi *(126 kPa)*

CHASSIS: Type front wheel assist **Serial No.** 972001PL **Tread width** rear 62.0" *(1575 mm)* to 124.0" *(3150 mm)* front 62.6" *(1590 mm)* to 88.6" *(2250 mm)* **Wheel base** 116.0" *(2946 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with full range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 1.56 *(2.69)* second 1.98 *(3.18)* third 2.31 *(3.71)* fourth 2.65 *(4.26)* fifth 3.13 *(5.03)* sixth 3.65 *(5.88)* seventh 4.31 *(6.93)* eighth 5.09 *(8.19)* ninth 5.95 *(9.58)* tenth 6.92 *(11.13)* eleventh 8.17 *(13.15)* twelfth 9.56 *(15.39)* thirteenth 10.95 *(17.62)* fourteenth 12.94 *(20.83)* fifteenth 15.14 *(24.37)* sixteenth 17.82 *(28.68)* seventeenth 21.07 *(33.91)* eighteenth 24.66 *(39.68)* reverse 2.03 *(3.26)*, 2.39 *(3.85)*, 2.80 *(4.50)*, 3.21 *(5.16)*, 3.79 *(6.10)*, 4.44 *(7.14)*, 5.22 *(8.40)*, 6.17 *(9.93)*, 7.22 *(11.62)* **Clutch** multiple wet disc electro-hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 1000 rpm at 2083 engine rpm **Unladen tractor mass** 18764 lb *(8511 kg)*

DRAWBAR PERFORMANCE
(UNBALLASTED—FRONT DRIVE ENGAGED)
MAXIMUM POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg *(kPa)*
				5th Gear					
129.03 *(96.23)*	17654 *(78.53)*	2.74 *(4.41)*	2248	14.37	0.608 *(0.370)*	11.55 *(2.28)*	185 *(85)*	60 *(16)*	28.85 *(97.70)*
				6th Gear					
144.47 *(107.73)*	16785 *(74.66)*	3.23 *(5.19)*	2129	8.90	0.544 *(0.331)*	12.91 *(2.54)*	187 *(86)*	61 *(16)*	28.86 *(97.73)*
				7th Gear					
152.16 *(113.46)*	16026 *(71.28)*	3.56 *(5.73)*	1984	8.41	0.509 *(0.310)*	13.80 *(2.72)*	192 *(89)*	64 *(18)*	28.86 *(97.73)*
				8th Gear					
157.24 *(117.25)*	14185 *(63.10)*	4.16 *(6.69)*	1903	5.64	0.491 *(0.299)*	14.29 *(2.82)*	191 *(88)*	65 *(18)*	28.85 *(97.70)*
				9th Gear					
157.17 *(117.20)*	11898 *(52.92)*	4.95 *(7.97)*	1907	4.14	0.492 *(0.300)*	14.26 *(2.81)*	191 *(88)*	66 *(19)*	28.85 *(97.70)*
				10th Gear					
163.63 *(122.02)*	10644 *(47.35)*	5.76 *(9.28)*	1900	3.69	0.474 *(0.289)*	14.81 *(2.91)*	196 *(91)*	67 *(19)*	28.85 *(97.70)*
				11th Gear					
163.48 *(121.91)*	8927 *(39.71)*	6.87 *(11.05)*	1901	2.87	0.475 *(0.289)*	14.80 *(2.92)*	190 *(88)*	68 *(20)*	28.86 *(97.73)*
				12th Gear					
159.66 *(119.06)*	7418 *(33.00)*	8.07 *(12.99)*	1899	2.42	0.486 *(0.295)*	14.46 *(2.85)*	192 *(89)*	69 *(21)*	28.87 *(97.77)*

DRAWBAR PERFORMANCE
(BALLASTED—FRONT DRIVE ENGAGED)
MAXIMUM POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg *(kPa)*
				4th Gear					
138.21 *(103.06)*	21183 *(94.23)*	2.45 *(3.94)*	2249	9.74	0.576 *(0.350)*	12.20 *(2.40)*	185 *(85)*	52 *(11)*	28.91 *(97.90)*
				5th Gear					
147.55 *(110.03)*	20218 *(89.93)*	2.74 *(4.40)*	2117	9.18	0.536 *(0.326)*	13.11 *(2.58)*	186 *(86)*	58 *(14)*	28.91 *(97.90)*
				6th Gear					
155.96 *(116.30)*	19296 *(85.83)*	3.03 *(4.88)*	1969	7.63	0.504 *(0.306)*	13.94 *(2.75)*	188 *(86)*	59 *(15)*	28.92 *(97.93)*
				7th Gear					
161.40 *(120.36)*	17243 *(76.70)*	3.51 *(5.65)*	1902	5.85	0.482 *(0.293)*	14.56 *(2.87)*	189 *(87)*	62 *(17)*	28.93 *(97.97)*
				8th Gear					
158.30 *(118.04)*	14061 *(62.55)*	4.22 *(6.79)*	1902	4.27	0.487 *(0.296)*	14.41 *(2.84)*	193 *(89)*	65 *(18)*	28.92 *(97.93)*
				9th Gear					
158.70 *(118.34)*	12000 *(53.38)*	4.96 *(7.98)*	1894	3.55	0.490 *(0.298)*	14.33 *(2.82)*	191 *(88)*	67 *(19)*	28.91 *(97.90)*
				10th Gear					
163.49 *(121.92)*	10563 *(46.98)*	5.80 *(9.34)*	1899	3.00	0.472 *(0.287)*	14.87 *(2.93)*	192 *(89)*	66 *(19)*	28.91 *(97.90)*
				11th Gear					
164.97 *(123.02)*	8953 *(39.82)*	6.91 *(11.12)*	1903	2.45	0.473 *(0.288)*	14.84 *(2.92)*	195 *(91)*	68 *(20)*	28.90 *(97.87)*
				12th Gear					
160.20 *(119.46)*	7395 *(32.89)*	8.12 *(13.07)*	1903	2.07	0.485 *(0.295)*	14.49 *(2.85)*	196 *(91)*	68 *(20)*	28.90 *(97.87)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests, the fuel temperature at the injection pump return was maintained at 135° F *(57°C)*. The pull in 4th and 5th gears (ballasted—front drive engaged) was limited to avoid excessive tractor bouncing. The performance results on this summary were taken from OECD tests conducted under the Code II Restricted Standard Test Code procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1699**, Summary 187, December 20, 1995.

LOUIS I. LEVITICUS
Engineer-in-Charge

L.L. BASHFORD
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Board of Tractor Test Engineers

DRAWBAR PERFORMANCE
(BALLASTED—FRONT DRIVE DISENGAGED)
FUEL CONSUMPTION CHARACTERISTICS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—10th Gear									
147.19 *(109.76)*	8223 *(36.58)*	6.71 *(10.80)*	2196	2.57	0.527 *(0.321)*	13.32 *(2.62)*	197 *(91)*	69 *(21)*	28.89 *(97.83)*
75% of Pull at Maximum Power—10th Gear									
114.35 *(85.27)*	6163 *(27.41)*	6.96 *(11.20)*	2261	1.92	0.585 *(0.356)*	12.01 *(2.37)*	187 *(86)*	70 *(21)*	28.89 *(97.83)*
50% of Pull at Maximum Power—10th Gear									
77.64 *(57.89)*	4105 *(18.26)*	7.09 *(11.42)*	2289	1.35	0.699 *(0.425)*	10.04 *(1.98)*	185 *(85)*	70 *(21)*	28.89 *(97.83)*
75% of Pull at Reduced Engine Speed—12th Gear									
114.41 *(85.31)*	6176 *(27.47)*	6.95 *(11.18)*	1632	1.92	0.487 *(0.296)*	14.41 *(2.84)*	187 *(86)*	70 *(21)*	28.89 *(97.83)*
50% of Pull at Reduced Engine Speed—12th Gear									
77.60 *(57.86)*	4111 *(18.29)*	7.08 *(11.39)*	1652	1.35	0.539 *(0.328)*	13.02 *(2.56)*	183 *(84)*	70 *(21)*	28.89 *(97.83)*
MAXIMUM POWER IN SELECTED GEARS									
5th Gear									
135.20 *(100.82)*	18156 *(80.76)*	2.79 *(4.49)*	2228	11.67	0.582 *(0.354)*	12.06 *(2.38)*	186 *(85)*	55 *(13)*	28.91 *(97.90)*
6th Gear									
144.79 *(107.97)*	16755 *(74.53)*	3.24 *(5.22)*	2131	8.37	0.544 *(0.331)*	12.92 *(2.54)*	188 *(87)*	60 *(16)*	28.94 *(98.00)*
7th Gear									
153.58 *(114.53)*	15839 *(70.45)*	3.64 *(5.85)*	1999	6.97	0.505 *(0.307)*	13.91 *(2.74)*	194 *(90)*	63 *(17)*	28.93 *(97.97)*
8th Gear									
156.13 *(116.42)*	14101 *(62.72)*	4.15 *(6.68)*	1900	5.43	0.496 *(0.302)*	14.17 *(2.79)*	195 *(91)*	66 *(19)*	28.91 *(97.90)*
9th Gear									
155.94 *(116.28)*	11867 *(52.78)*	4.93 *(7.93)*	1903	4.11	0.496 *(0.301)*	14.17 *(2.79)*	196 *(91)*	67 *(19)*	28.91 *(97.90)*
10th Gear									
162.76 *(121.37)*	10639 *(47.32)*	5.74 *(9.23)*	1898	3.66	0.476 *(0.290)*	14.74 *(2.90)*	195 *(91)*	66 *(19)*	28.91 *(97.90)*
11th Gear									
162.85 *(121.43)*	8923 *(39.69)*	6.84 *(11.01)*	1900	2.93	0.475 *(0.289)*	14.79 *(2.91)*	196 *(91)*	68 *(20)*	28.90 *(97.87)*
12th Gear									
159.00 *(118.57)*	7410 *(32.96)*	8.05 *(12.95)*	1898	2.47	0.489 *(0.297)*	14.36 *(2.83)*	197 *(91)*	68 *(20)*	28.89 *(97.83)*

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At 75% load in 7th gear	76.0
Bystander	—

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires—No., size, ply & psi *(kPa)*	Four 18.4R46; ***; 20 *(140)*	Two 18.4R46; ***, 20 *(140)*
Ballast—Duals (total)	1824 lb *(827 kg)*	None
—Test Equip. (total)	74 lb *(34 kg)*	None
Front Tires—No., size, ply & psi *(kPa)*	Two 14.9R34; ***; 24 *(165)*	Two 14.9R34; ***; 24 *(165)*
Ballast—Liquid (total)	None	None
—Cast Iron (total)	None	None
Height of Drawbar	26.0 in *(660 mm)*	24.5 in *(620 mm)*
Static Weight with Operator—Rear	14094 lb *(6392 kg)*	12196 lb *(5531 kg)*
—Front	6734 lb *(3055 kg)*	6734 lb *(3055 kg)*
—Total	20828 lb *(9447 kg)*	18930 lb *(8586 kg)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III
Quick Attach: None

Maximum Force Exerted Through Whole Range:	6318 lbs	*(28.1 kN)*
	8622 lbs	*(38.4 kN)* with (2) lift assist cylinders
i) Opening pressure of relief valve:	NA	
Sustained pressure with pump stalled:	2770 psi	*(191 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	28.1 GPM	*(106.4 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	24.8 GPM	*(93.9 l/min)*
Delivery pressure:	2450 psi	*(169 bar)*
Power:	35.4 HP	*(26.4 kW)*

The following values apply to tractors with chassis S/N 972300 and higher.

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III
Quick Attach: no

Maximum Force Exerted Through Whole Range:	6318 lbs	*(28.1 kN)*
	8622 lbs	*(38.4 kN)* (with two lift assist cylinders)

THREE POINT LIFT PERFORMANCE

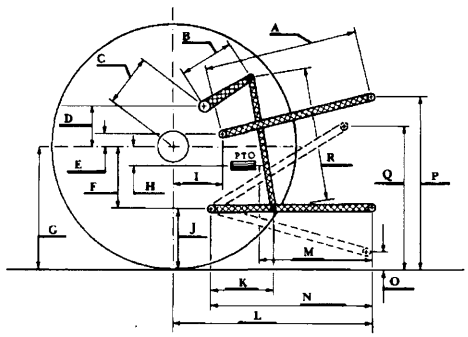
Observed Maximum Pressure psi. *(bar)*	2725 *(157)*
Location	lift cylinder
Hydraulic oil temperature °F *(°C)*	149 *(65)*
Location	hydraulic sump
Category	III
Quick attach	no

As per current SAE test procedures

Hitch point distance to ground level in. / to ground level *(mm)*	8.0 *(203)*	13.3 *(338)*	18.6 *(472)*	24.0 *(610)*	29.3 *(744)*	34.7 *(881)*	40.0 *(1016)*
Lift force on frame lb. / Lift force on frame *(kN)*	8046 *(35.8)*	7722 *(34.4)*	8280 *(36.8)*	8478 *(37.7)*	8478 *(37.7)*	8442 *(37.5)*	7722 *(34.4)*
with 2 lift assist cylinders							
Hitch point distance to ground level in. / to ground level *(mm)*	8.0 *(203)*	13.3 *(338)*	18.6 *(472)*	24.0 *(610)*	29.3 *(744)*	34.7 *(881)*	40.0 *(1016)*
Lift force on frame lb / Lift force one frame *(kN)*	10980 *(48.8)*	10602 *(47.2)*	10944 *(48.7)*	10998 *(48.9)*	10638 *(47.3)*	10260 *(45.6)*	9684 *(43.1)*

As per current ASAE test procedures

Hitch point distance to ground level in. / to ground level *(mm)*	8.0 *(203)*	13.3 *(338)*	18.6 *(472)*	24.0 *(610)*	29.3 *(744)*	34.7 *(881)*	40.0 *(1016)*
Lift force on frame lb. / Lift force on frame *(kN)*	8858 *(39.4)*	8501 *(37.8)*	9116 *(40.5)*	9334 *(41.5)*	9334 *(41.5)*	9380 *(41.7)*	8501 *(37.8)*
with 2 lift assist cylinders							
Hitch point distance to ground level in. / to ground level *(mm)*	8.0 *(203)*	13.3 *(338)*	18.6 *(472)*	24.0 *(610)*	29.3 *(744)*	34.7 *(881)*	40.0 *(1016)*
Lift force on frame lb. / Lift force on frame *(kN)*	12088 *(53.8)*	11672 *(51.9)*	12048 *(53.6)*	12108 *(53.9)*	11712 *(52.1)*	11400 *(50.7)*	10861 *(48.3)*



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	25.3	*641*
B	16.0	*406*
C	19.8	*502*
D	18.2	*461*
E	9.1	*230*
F	10.2	*259*
G	35.0	*889*
H	1.9	*48*
I	20.1	*508*
J	24.8	*630*
K	21.4	*543*
L	45.3	*1150*
M	22.4	*568*
N	34.8	*884*
O	9.0	*229*
P	51.8	*1316*
Q	36.1	*918*
R	38.7	*983*

AGCO ALLIS 9675 DIESEL

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